

IN THE CLAIMS:

The listing of claims which follows replaces all previous versions.

1. (Currently Amended) A device for capturing flying insects, said device comprising:

an insect trap;

an airflow generator generating (a) an outflow comprising an insect attractant dispersed therein and (b) an inflow;

an outflow opening communicated to said airflow generator, said outflow opening enabling said outflow to flow outwardly from said device ~~to create a plume flowing downwardly and spreading~~ spread downwardly and radially from said device; and

an inlet opening communicated to said airflow generator and said insect trap and positioned vertically higher than said outlet opening, said airflow generator drawing said inflow ~~substantially counter to and immediately adjacent an upper portion of said plume and then into said trap via said inlet opening such that insects attracted to said outflow and flying along the upper portion of said plume thereof towards said outflow opening intersect said inflow and are thereby drawn into said trap by said inflow~~ intersecting said inflow are drawn into said trap;

said airflow generator generating said inflow and said outflow in a counterflow relationship wherein, outside the device, an overlapping region of said inflow overlaps an overlapped region of said outflow and flows substantially counter to and immediately adjacent the overlapped region of said outflow.

2. (Original) A device according to claim 1, wherein said outflow opening faces downwardly and directs said outflow downwardly.

3. (Original) A device according to claim 2, further comprising a tubular member having an open lower end providing said outflow opening.

4. (Original) A device according to claim 3, further comprising a cover member positioned with respect to said tubular member such that an edge portion of said cover member is spaced from said tubular member to define said inlet opening,

said tubular member having an open upper end in communication with said inlet opening to enable said inflow to flow through said tubular member and out said open lower end as part of said outflow.

5. (Original) A device according to claim 4, wherein said cover member is a tubular housing comprising a top wall and a tubular wall extending downwardly from said top wall,

said tubular housing being positioned over said tubular member such that said tubular wall extends downwardly alongside said tubular member to define said inlet as an annular downwardly facing opening between said edge portion and said tubular member.

6. (Original) A device according to claim 4, wherein said airflow generator comprises a fan.

7. (Original) A device according to claim 6, wherein said fan is a single fan.

8. (Original) A device according to claim 7, wherein said fan is positioned within said tubular member.

9. (Original) A device according to claim 8, wherein said insect trap is positioned within said tubular member.

10. (Original) A device according to claim 9, wherein said insect trap is a flexible mesh structure.

11. (Original) A device according to claim 10, wherein said mesh structure is positioned above said fan.

12. (Original) A device according to claim 11, wherein said insect attractant is carbon dioxide.

13. (Original) A device according to claim 12, wherein said carbon dioxide is supplied to said tubular member at a point higher than said fan.

14. (Original) A device according to claim 13, further comprising a tank containing said carbon dioxide and a hose supplying said carbon dioxide to said tubular member from said tank.

15. (Original) A device according to claim 14, wherein said hose supplies said carbon dioxide directly to said tubular member.

16. (Original) A device according to claim 15, wherein said tubular member has a port formed therethrough and said hose is connected to said port.

17. (Original) A device according to claim 1, wherein said airflow generator comprises a fan.

18. (Original) A device according to claim 17, wherein said airflow generator is a single fan.

19. (Original) A device according to claim 17, wherein said airflow generator comprises multiple fans.

20. (Original) A device according to claim 19, wherein said multiple fans is two fans, one of said fans generating said inflow, the other of said fans generating said outflow.

21. (Original) A device according to claim 1, wherein said insect trap is a flexible mesh structure.

22. (Original) A device according to claim 1, wherein said insect attractant is carbon dioxide.

23. (Original) A device according to claim 22, further comprising a tank containing said carbon dioxide.

24. (Currently Amended) A method for capturing flying insects using a device for capturing flying insects, said device comprising an insect trap; said method comprising:

generating an outflow, comprising an insect attractant dispersed therein, flowing outwardly from said device ~~to create a plume flowing downwardly~~ and spreading downwardly and radially from said device; and

generating an inflow flowing ~~substantially counter to and immediately adjacent an upper portion of said plume and then~~ into said trap such that insects attracted to said outflow and flying along the upper portion of said plume thereof towards said device intersect said inflow and are thereby drawn into said trap by said inflow intersecting said inflow are drawn into said trap;

wherein said inflow and said outflow are generated in a counterflow relationship wherein, outside the device, an overlapping region of said inflow overlaps an overlapped region of said outflow and flows substantially counter to and immediately adjacent the overlapped region of said outflow.

25. (Original) A method according to claim 24, wherein said device includes an airflow generator, an outflow opening communicated with said airflow generator, and an inflow opening communicated with said insect trap and said airflow generator,

said generating said inflow and said generating said outflow being performed by said airflow generator.

26. (Currently Amended) A method according to claim 25, wherein said outflow opening faces downwardly and wherein said outflow opening directs said outflow downwardly ~~to create said plume.~~

27. (Original) A method according to claim 26, wherein said device further comprises a tubular member having an open lower end providing said outflow opening; said generating said outflow including directing said outflow through said open lower end.

28. (Original) A method according to claim 27, wherein said device further comprises a cover member positioned with respect to said tubular member such that an edge portion of said cover member is spaced from said tubular member to define said inlet opening, said tubular member having an open upper end in communication with said inlet opening;

said generating said outflow and said generating said inflow being performed by drawing said inflow in through said inlet opening into said open upper end and then out through said open lower end so that said inflow is part of said outflow.

29. (Original) A method according to claim 28, wherein said cover member is a tubular housing comprising a top wall and a tubular wall extending downwardly from said top wall, said tubular housing being positioned over said tubular member such that said tubular wall extends downwardly alongside said tubular member to define said inlet opening as an annular downwardly facing opening between said edge portion and said tubular member,

said generating said inflow including drawing said inflow upwardly from said inlet opening between said tubular wall and said tubular member and then into said open upper end of said tubular member.

30. (Original) A method according to claim 28, wherein said airflow generator comprises a single fan and wherein both generating said inflow and generating said outflow is performed by operating said fan.

31. (Original) A method according to claim 30, wherein said insect attractant is carbon dioxide and said method further comprises supplying said carbon dioxide to said tubular member.

32. (Original) A method according to claim 31, wherein said fan is positioned within said tubular member and wherein said carbon dioxide is supplied at a point higher than said fan.

33. (Original) A method according to claim 32, wherein said carbon dioxide is supplied directly to said tubular member.

34. (Original) A method according to claim 31, wherein said carbon dioxide is supplied directly to said tubular member.

35. (Original) A device according to claim 3, wherein said insect attractant is carbon dioxide.

36. (Original) A device according to claim 35, further comprising a tank containing said carbon dioxide.

37. (Original) A device according to claim 36, further comprising a hose supplying said carbon dioxide from said tank to said tubular member.

38. (Original) A device according to claim 37 wherein said hose supplies said carbon dioxide directly to said tubular member.

39. (Currently Amended) A method for capturing flying insects using a device for capturing flying insects, said device comprising an insect trap; said method comprising:

generating an outflow, comprising an insect attractant dispersed therein, flowing outwardly from said device ~~to create a plume flowing downwardly and away~~ and spreading downwardly and radially from said device; and

generating an inflow flowing ~~substantially counter to an upper portion of said plume and then~~ into said trap, ~~the inflow drawing insects attracted to said outflow and flying along the upper portion of said plume thereof towards said device into said trap~~ such that insects intersecting said inflow are drawn into said trap;

wherein said inflow and said outflow are generated in a counterflow relationship wherein, outside the device, an overlapping region of said inflow overlaps an overlapped region of said outflow and flows substantially counter to the overlapped region of said outflow.

40. (Original) A method according to claim 39, wherein said device includes an airflow generator, an outflow opening communicated with said airflow generator, and an inflow opening communicated with said insect trap and said airflow generator,

said generating said inflow and said generating said outflow being performed by said airflow generator.

41. (Original) A method according to claim 40, wherein said outflow opening faces downwardly and wherein said outflow opening directs said outflow downwardly to create said plume.

42. (Original) A method according to claim 41, wherein said device further comprises a tubular member having an open lower end providing said outflow opening; said generating said outflow including directing said outflow through said open lower end.

43. (Original) A method according to claim 42, wherein said device further comprises a cover member positioned with respect to said tubular member such that an edge portion of said cover member is spaced from said tubular member to define said inlet opening, said tubular member having an open upper end in communication with said inlet opening;

said generating said outflow and said generating said inflow being performed by drawing said inflow in through said inlet opening into said open upper end and then out through said open lower end so that said inflow is part of said outflow.

44. (Original) A method according to claim 43, wherein said cover member is a tubular housing comprising a top wall and a tubular wall extending downwardly from said top wall, said tubular housing being positioned over said tubular member such that said tubular wall extends downwardly alongside said tubular member to define said inlet opening as an annular downwardly facing opening between said edge portion and said tubular member,

said generating said inflow including drawing said inflow upwardly from said inlet opening between said tubular wall and said tubular member and then into said open upper end of said tubular member.

45. (Original) A method according to claim 43, wherein said airflow generator comprises a single fan and wherein both generating said inflow and generating said outflow is performed by operating said fan.

46. (Original) A method according to claim 45, wherein said insect attractant is carbon dioxide and said method further comprises supplying said carbon dioxide to said tubular member.

47. (Original) A method according to claim 46, wherein said fan is positioned within said tubular member and wherein said carbon dioxide is supplied at a point higher than said fan.

48. (Original) A method according to claim 47, wherein said carbon dioxide is supplied directly to said tubular member.

49. (Original) A method according to claim 48, wherein said carbon dioxide is supplied directly to said tubular member.

50. (Currently Amended) A device for capturing flying insects, said device comprising:

an insect trap;

an airflow generator generating (a) an outflow comprising an insect attractant dispersed therein and (b) an inflow;

an outflow opening communicated to said airflow generator, said outflow opening enabling said outflow to flow outwardly from said device ~~to create a plume flowing downwardly and away~~ and spread downwardly and radially from said device; and

an inlet opening communicated to said airflow generator and said insect trap and positioned vertically higher than said outlet opening, said airflow generator drawing said inflow ~~substantially counter to an upper portion of said plume and then~~ into said trap via said inlet opening ~~so as to draw insects attracted to said outflow and flying along the upper portion of said plume thereof towards said outflow opening into said trap~~ such that insects intersecting said inflow are drawn into said trap;

said airflow generator generating said inflow and said outflow in a counterflow relationship wherein, outside the device, an overlapping region of said inflow overlaps an overlapped region of said outflow and flows substantially counter to the overlapped region of said outflow.

51. (Original) A device according to claim 50, wherein said outflow opening faces downwardly and directs said outflow downwardly.

52. (Original) A device according to claim 51, further comprising a tubular member having an open lower end providing said outflow opening.

53. (Original) A device according to claim 52, further comprising a cover member positioned with respect to said tubular member such that an edge portion of said cover member is spaced from said tubular member to define said inlet opening,

said tubular member having an open upper end in communication with said inlet opening to enable said inflow to flow through said tubular member and out said open lower end as part of said outflow.

54. (Original) A device according to claim 53, wherein said cover member is a tubular housing comprising a top wall and a tubular wall extending downwardly from said top wall,

said tubular housing being positioned over said tubular member such that said tubular wall extends downwardly alongside said tubular member to define said inlet as an annular downwardly facing opening between said edge portion and said tubular member.

55. (Original) A device according to claim 53, wherein said airflow generator comprises a fan.

56. (Original) A device according to claim 55, wherein said fan is a single fan.

57. (Original) A device according to claim 56, wherein said fan is positioned within said tubular member.

58. (Original) A device according to claim 57, wherein said insect trap is positioned within said tubular member.

59. (Original) A device according to claim 58, wherein said insect trap is a flexible mesh structure.

60. (Original) A device according to claim 59, wherein said mesh structure is positioned above said fan.

61. (Original) A device according to claim 59, wherein said insect attractant is carbon dioxide.

62. (Original) A device according to claim 61, wherein said carbon dioxide is supplied to said tubular member at a point higher than said fan.

63. (Original) A device according to claim 62, further comprising a tank containing said carbon dioxide and a hose supplying said carbon dioxide to said tubular member from said tank.

64. (Original) A device according to claim 63, wherein said hose supplies said carbon dioxide directly to said tubular member.

65. (Original) A device according to claim 64, wherein said tubular member has a port formed therethrough and said hose is connected to said port.

66. (Original) A device according to claim 50, wherein said airflow generator comprises a fan.

67. (Original) A device according to claim 66, wherein said airflow generator is a single fan.

68. (Original) A device according to claim 66, wherein said airflow generator comprises multiple fans.

69. (Original) A device according to claim 68, wherein said multiple fans is two fans, one of said fans generating said inflow, the other of said fans generating said outflow.

70. (Original) A device according to claim 50, wherein said insect trap is a flexible mesh structure.

71. (Original) A device according to claim 50, wherein said insect attractant is carbon dioxide.

72. (Original) A device according to claim 71, further comprising a tank containing said carbon dioxide.

73. (Presently Amended) A device according to claim [[72]] 52, wherein said insect attractant is carbon dioxide.

74. (Original) A device according to claim 73, further comprising a tank containing said carbon dioxide.

75. (Original) A device according to claim 74, further comprising a hose supplying said carbon dioxide from said tank to said tubular member.

76. (Original) A device according to claim 75, wherein said hose supplies said carbon dioxide directly to said tubular member.

77. (New) A device according to claim 1, wherein said outflow comprises an effective amount of the insect attractant dispersed therein.

78. (New) A method according to claim 24, wherein said outflow comprises an effective amount of the insect attractant dispersed therein.

79. (New) A method according to claim 39, wherein said outflow comprises an effective amount of the insect attractant dispersed therein.

80. (New) A device according to claim 50, wherein said outflow comprises an effective amount of the insect attractant dispersed therein.

81. (New) A method according to claim 24, wherein said insect attractant is carbon dioxide.

82. (New) A method according to claim 39, wherein said insect attractant is carbon dioxide.

83. (New) A device for capturing flying insects, comprising:
an insect trap;
an airflow generator generating (a) an outflow comprising an insect attractant dispersed therein and (b) an inflow;
an outflow opening communicated to said airflow generator, said outflow opening enabling said outflow to flow outwardly from said device; and
an inflow opening communicated to said airflow generator and said insect trap, said airflow generator drawing said inflow into said trap such that insects intersecting said inflow are drawn into said trap;
said airflow generator generating said inflow and said outflow such that, outside said device, said inflow extends substantially to or below an elevation of the outflow opening.

84. (New) A device according to claim 83, wherein said airflow generator generates said inflow and said outflow in a counterflow relationship wherein, outside the device, an overlapping region of said inflow overlaps an overlapped region of said outflow and flows substantially counter to and immediately adjacent the overlapped region of said outflow.

85. (New) A device according to claim 83, wherein said outflow opening faces downwardly and directs said outflow downwardly.

86. (New) A device according to claim 85, further comprising a tubular member having an open lower end providing said outflow opening.

87. (New) A device according to claim 86, further comprising a cover member positioned with respect to said tubular member such that an edge portion of said cover member is spaced from said tubular member to define said inlet opening,

said tubular member having an open upper end in communication with said inlet opening to enable said inflow to flow through said tubular member and out said open lower end as part of said outflow.

88. (New) A device according to claim 87, wherein said cover member is a tubular housing comprising a top wall and a tubular wall extending downwardly from said top wall,

said tubular housing being positioned over said tubular member such that said tubular wall extends downwardly alongside said tubular member to define said inlet as an annular downwardly facing opening between said edge portion and said tubular member.

89. (New) A device according to claim 86, wherein said airflow generator comprises a fan.

90. (New) A device according to claim 89, wherein said fan is a single fan.

91. (New) A device according to claim 90, wherein said fan is positioned within said tubular member.

92. (New) A device according to claim 91, wherein said insect trap is positioned within said tubular member.

93. (New) A device according to claim 92, wherein said insect trap is a flexible mesh structure.

94. (New) A device according to claim 93, wherein said mesh structure is positioned above said fan.

95. (New) A device according to claim 94, wherein said insect attractant is carbon dioxide.

96. (New) A device according to claim 95, wherein said carbon dioxide is supplied to said tubular member at a point higher than said fan.

97. (New) A device according to claim 96, further comprising a tank containing said carbon dioxide and a hose supplying said carbon dioxide to said tubular member from said tank.

98. (New) A device according to claim 97, wherein said hose supplies said carbon dioxide directly to said tubular member.

99. (New) A device according to claim 98, wherein said tubular member has a port formed therethrough and said hose is connected to said port.

100. (New) A device according to claim 83, wherein said airflow generator comprises a fan.

101. (New) A device according to claim 100, wherein said airflow generator is a single fan.

102. (New) A device according to claim 100, wherein said airflow generator comprises multiple fans.

103. (New) A device according to claim 102, wherein said multiple fans is two fans, one of said fans generating said inflow, the other of said fans generating said outflow.

104. (New) A device according to claim 83, wherein said insect trap is a flexible mesh structure.

105. (New) A device according to claim 83, wherein said insect attractant is carbon dioxide.

106. (New) A device according to claim 105, further comprising a tank containing said carbon dioxide.

107. (New) A device according to claim 86, wherein said insect attractant is carbon dioxide.

108. (New) A device according to claim 107, further comprising a tank containing said carbon dioxide.

109. (New) A device according to claim 108, further comprising a hose supplying said carbon dioxide from said tank to said tubular member.

110. (New) A device according to claim 109 wherein said hose supplies said carbon dioxide directly to said tubular member.

111. (New) A device according to claim 83, wherein said outflow comprises an effective amount of the insect attractant dispersed therein.

112. (New) A method for capturing flying insects using a device for capturing flying insects, said device comprising an insect trap; said method comprising:

generating an outflow, comprising an insect attractant dispersed therein, flowing outwardly from an outflow opening on said device;

generating an inflow flowing into said trap such that insects intersecting said inflow are drawn into said trap;

wherein said inflow and said outflow are generated such that, outside said device, said inflow extends substantially to or below an elevation of the outflow opening.

113. (New) A method according to claim 112, wherein said inflow and said outflow are generated in a counterflow relationship wherein, outside the device, an

overlapping region of said inflow overlaps an overlapped region of said outflow and flows substantially counter to and immediately adjacent the overlapped region of said outflow.

114. (New) A method according to claim 112, wherein said device includes an airflow generator, an outflow opening communicated with said airflow generator, and an inflow opening communicated with said insect trap and said airflow generator,

said generating said inflow and said generating said outflow being performed by said airflow generator.

115. (New) A method according to claim 114, wherein said outflow opening faces downwardly and wherein said outflow opening directs said outflow downwardly to create said plume.

116. (New) A method according to claim 115, wherein said device further comprises a tubular member having an open lower end providing said outflow opening; said generating said outflow including directing said outflow through said open lower end.

117. (New) A method according to claim 116, wherein said device further comprises a cover member positioned with respect to said tubular member such that an edge portion of said cover member is spaced from said tubular member to define said inlet opening, said tubular member having an open upper end in communication with said inlet opening;

said generating said outflow and said generating said inflow being performed by drawing said inflow in through said inlet opening into said open upper end and then out through said open lower end so that said inflow is part of said outflow.

118. (New) A method according to claim 117, wherein said cover member is a tubular housing comprising a top wall and a tubular wall extending downwardly from said top wall, said tubular housing being positioned over said tubular member such that said tubular wall extends downwardly alongside said tubular member to define said inlet opening as an annular downwardly facing opening between said edge portion and said tubular member,

said generating said inflow including drawing said inflow upwardly from said inlet opening between said tubular wall and said tubular member and then into said open upper end of said tubular member.

119. (New) A method according to claim 117, wherein said airflow generator comprises a single fan and wherein both generating said inflow and generating said outflow is performed by operating said fan.

120. (New) A method according to claim 119, wherein said insect attractant is carbon dioxide and said method further comprises supplying said carbon dioxide to said tubular member.

121. (New) A method according to claim 120, wherein said fan is positioned within said tubular member and wherein said carbon dioxide is supplied at a point higher than said fan.

122. (New) A method according to claim 112, wherein said outflow comprises an effective amount of the insect attractant dispersed therein.

123. (New) A method according to claim 112, wherein said insect attractant is carbon dioxide.